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Old Way . . .

CURING RICKETS in the CLEFT of an ASH TREE

FOR many centuries,—and apparently down to the present time, even in this country—ricketic children have been passed through a cleft ash tree to cure them of their rickets, and thenceforth a sympathetic relationship was supposed to exist between them and the tree.

Frazer* states that the ordinary mode of effecting the cure is to split a young ash sapling longitudinally for a few feet and pass the child, naked, either three times or three times three through the fissure at sunrise. In the West of England, it is said the passage must be "against the sun." As soon as the ceremony is performed, the tree is bound tightly up and the fissure plastered over with mud or clay. The belief is that just as the cleft in the tree will be healed, so the child's body will be healed, but that if the rift in the tree remains open, the deformity in the child will remain, too, and if the tree were to die, the death of the child would surely follow.

*Frazer, J. G.: The Golden Bough, vol. 1, New York, Macmillan & Co., 1923

It is ironical that the practice of attempting to cure rickets by holding the child in the cleft of an ash tree was associated with the rising of the sun, the light of which we now know is in itself one of Nature's specifics.

New Way . . .

Preventing and Curing Rickets *with* MEAD'S OLEUM PERCOMORPHUM

NOWADAYS, the physician has at his command, Mead's Oleum Percomorphum, a Council-Accepted vitamin D product which actually prevents and cures rickets, when given in proper dosage.

Like other specifics for other diseases, larger dosage may be required for extreme cases. It is safe to say that when used in the indicated dosage, Mead's Oleum Percomorphum is a specific in almost all cases of rickets, regardless of degree and duration.

Mead's Oleum Percomorphum because of its high vitamins A and D content is also useful in deficiency conditions such as tetany, osteomalacia and xerophthalmia.

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THE JOURNAL OF SCHOOL HEALTH

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Vol. XVI OCTOBER, 1946 No. 8

NEW YORK STATE ASSOCIATION OF SCHOOL PHYSICIANS: PRESIDENTIAL ADDRESS*

CLARENCE A. GREENLEAF, M.D.
Director of School Health Services, Olean, N. Y.

I shall consider three school matters which seem important.

1. Protection against smallpox and diphtheria. The usual routine of vaccination and toxoid protection in our schools, if successful, means hours of intensive work by the medical personnel. The methods employed in Olean have been time consuming. We hold, in cooperation with the Board of Health, smallpox and toxoid clinics usually each year. We meet with the Parent-Teachers Association first, and explain what we wish to do, ask their cooperation in interesting parents, and ask them to give assistance in handling the children at the scheduled clinics. We issue consent cards in all schools to be signed by parents, and arrange dates for ten or more clinics, at least a series in each grade school. Such work consumes a great deal of time which could be used otherwise.

Our statistics show the result of this work over years. For example: In a survey of 500 high school boys, 84% were protected against smallpox and 94.6% against diphtheria; 500 high school girls showed 84% protected against smallpox and 96.6% against diphtheria. A survey of the records of 240 pupils examined for working certificates showed 82% had been vaccinated and 92% protected against diphtheria.

Compare these records with those of 200 pupils entering kindergarten last year. 12.5% had been protected against smallpox and 46.5% against diphtheria.

Last month we held our routine clinics in the school system for vaccinations and vaccinated 2,157 pupils.

It is interesting to note the protection given our armed forces during the last war. I submit one record, that of a Captain in the Army: Smallpox vaccination, 3; triple typhoid, 6; typhus, 5; tetanus, 6; cholera, 4; yellow fever, 1; plague, 4.

We believe that parents desire to protect their children and

* Presented before the New York State Association of School Physicians, Saratoga Springs, N. Y., June 24, 1946.

will bring them to school clinics when they have the opportunity. Is it not about time that we as health workers in the schools use every effort to bring about compulsory smallpox and diphtheria protection. I hope I live to see such statutes operating.

2. Tuberculosis Supervision. Our Board of Education requires all new employees to have a physical examination and X-ray of chest. Last year they requested all old employees to have an X-ray of chest. This was done and paid for by the board. One case of active tuberculosis and several with healed lesions were found. These latter are X-rayed every six months.

The question then arose as to the service we could give the students. It was decided to offer the patch test and X-rays of positive reactors to all students 14 years of age and over. The following plan was followed:

An assembly of all students was arranged. At this assembly the danger of tuberculosis was considered, the patch test was described, and the routine of X-ray was shown. Dates were arranged for the patch testing and X-raying. 100% of the students responded. We found with 1,205 students, 268 positive reactors, over 22%. All were X-rayed and 12 cases of primary tuberculosis were found. These pupils are kept under observation and X-rayed every 6 months.

One cannot help but refer to the interest our teachers and students showed. One teacher cited several subjects to be selected by her class to write essays about. Many selected the X-ray program as their subject.

3. Relations of Medical Personnel to Boards of Education. I have discussed this question with Medical Inspectors and find a lack of cooperation with their Boards. Let me outline the procedure which has been followed for years in our school system.

Our present Board consists of one lawyer, one oculist, one dentist, one manufacturer, three heads of departments in industrial plants, one accountant and one mechanic, a representative group of men who without compensation give unlimited service to our school system. We want the cooperation of this group in any health service we may wish to carry out. We want them to know what we, as a medical service, do for the benefit of the health of children. We want their consent in any health work we plan.

To this end the medical inspector meets with the board at their regular sessions and submits a monthly report covering the service—number of pupils examined; number of employment certificates issued, any unusual situation which may have developed

as an outbreak of measles, etc. This report comes under routine business and is read, accepted and filed. In submitting this report there is always a discussion by the board members and questions asked relative to health matters.

One cannot overemphasize the value of such relationship. With such a plan, the board members know what is being done and never, in my experience, have quibbled over funds or failed to give consent to any outlined program to the advantage of our health service in the school system.

* * * * *

A Medical Center For Children,—Unusual among forthcoming developments in the field of medical institutions is the proposal to make the Children's Hospital of Boston the first medical center for children to be developed anywhere in the world. The Children's Hospital of Boston has had 77 years of service to the community. Its board of trustees sees now an opportunity for expanding existing services and for creating new units which will complete the project now contemplated. Among the new divisions to be in corporated in the institution will be a neurologic institute for the care of cases in the fields of neurology, neurosurgery and psychiatry, a new division for adolescents and considerable expansions in the field of infectious diseases. Proposed also is a center in which special attention will be given to cancer. The New Foundation for Infantile Paralysis has aided the project by making the Children's Hospital of Boston a special center for the study and care of cases of poliomyelitis. This section will include graduate teaching in infantile paralysis for physicians, nurses and physical therapists. A child health unit planned for preventive medicine will round out the concept. The Children's Hospital is affiliated with Harvard Medical School and cooperates also with other educational institutions and with other general and specialized hospitals in Boston. Obviously the opportunities for research in an institution of this type will be unexcelled. The development is in accord with recent trends in medical care brought about by the development of new tcchnichs in transportation of the sick, so that a medical center of this type is within a few hours of access to populations hundreds of miles removed. The most highly technical and specialized services of medicine and of groups of specialists are thus made easy of access to difficult cases which in a previous era would have had nothing resembling a similar opportunity for scientific diagnosis and treatment. *Journal A. M. A.*, Sept. 14, 1946, p. 83.

* * * * *

THE FUTURE OF THE SCHOOL HEALTH PROGRAM: THE CONTROL OF COMMUNICABLE DISEASES IN SCHOOL CHILDREN*

HOLLIS S. INGRAHAM, M. D.

Director, Division of Communicable Diseases, New York State Health Department

Within the last generation there has been a phenomenal decline in mortality among school children. Even deaths from accidents are less frequent. The major factor in this improvement has been due to better communicable disease control. However, we are not entitled to relax our efforts in this field, for very obvious reasons. With present methods, it is yet entirely possible greatly to reduce deaths and disability from most diseases, and there is no reason to believe that there will not be improved methods of control within the forseeable future. Also, any relenting of vigilance would almost surely lead to a significant increase in many diseases. Indeed, there is very recent evidence indicating that it will be necessary to redouble our efforts merely to maintain some of the gains already achieved. This latter point is being sharply driven home by the recent distinct rise in diphtheria in Upstate New York.

In the brief time available today, I cannot hope to cover this subject completely and, hence, must confine my remarks to several rather broad methods that the experience has shown are the most fruitful.

A very sizable portion of the control of communicable disease in school children must be accomplished very early in the preschool years, indeed, within the very first year of life. During this time, every future school child should have been given adequate protection against whooping cough, diphtheria, smallpox and tetanus. It is presently recommended that every infant be inoculated against whooping cough on reaching the age of three months, be immunized against diphtheria beginning at six months of age, and be vaccinated at some convenient time early in the first year of life. Obviously, the school, as such, cannot directly implement such a program, the responsibility for which falls primarily upon the private physician and upon the health officer. However, the school can exert immense influence in achieving this schedule simply through its primary function of education. None of these procedures are compulsory, except that children must be vaccinated

* Presented before the New York State School Physicians' Association, Saratoga Springs, N. Y., June 24, 1946.

against smallpox before entering school in cities of 50,000 and over. Hence, we must rely almost entirely upon enlightened public opinion. There has grown up rather general acceptance that children should be immunized, but there is still the belief that any time prior to school age is early enough. We are all aware of the fallacy of this, particularly when we consider that over 50 per cent of deaths from pertussis occur in the first six months of life, and that nearly 80 per cent occur within the first year. We also know that half the deaths from diphtheria occur in the preschool child, and that morbidity from this disease cannot be controlled, except through early immunization.

Human nature being what it is, we all find it extremely difficult to exert ourselves to prevent that which appears to be remote and unrelated to our every-day living. We had, to a certain extent, acquired that attitude toward diphtheria, but most of us have been rudely reawakened by the recent sharp increase of cases and deaths from this disease.

It is even more difficult to think of smallpox as a reality and as a threat to the well being of the school child. It is seven years since smallpox has been reported in Upstate New York, and it seems almost inconceivable that in the days before Jenner this disease was just as common as measles, which all of us have very recently encountered in such large numbers. The recent outbreak of malignant smallpox in the State of Washington is of great interest. Despite vigorous efforts at vaccination after the introduction of this disease, there have been, so far, seventeen deaths in and around Seattle. I personally saw a school child dying from malignant smallpox somewhat less than a year ago, and it is a most unsettling experience.

More and more, both from laboratory studies and from practical experience, the necessity of stimulating or booster doses of our immunizing antigens is being stressed. This is particularly needful in diphtheria, as the diminution in the number of cases and carriers in recent years has lessened opportunities for natural restimulation. The school authorities can be most effective in connection with the preschool round-up in urging and arranging with the health officer or the private physician for the administration of a single stimulating dose of diphtheria toxoid, and of revaccination. There is probably also merit in booster doses against whooping cough at this time, for although the peak of this disease has been passed by the time the child is entering school, and mortality is practically nil, the disease is still a substantial contributor

to school-child morbidity. It is highly desirable that booster inoculations be given prior to school entry.

There are, of course, numerous diseases against which we do not have effective immunizing agents. As you know, among school children at the present time the communicable diseases which are most disastrous are pneumonia, tuberculosis, and rheumatic fever.

Pneumonia practically never occurs as epidemics among school children and we do not have at the present time effective methods of prophylaxis. Hence, our reliance must continue to be on early recognition and prompt medical care, modern therapeutics being such that pneumonia, properly treated, should rarely cause death in a school child.

Rheumatic fever, of course, remains an extremely difficult and perplexing problem. It is, obviously, closely associated with streptococcal illness, but it is impossible as yet to apply effective prophylaxis to all the various manifestations of streptococcal fever. We are forced to rely chiefly on our older methods of early recognition and prompt medical care for these diseases. During times of epidemic prevalence, daily inspection by the nurse-teacher, or even by the teacher, herself, can be of very considerable assistance in detecting and excluding early cases of streptococcal infection.

The problem of the control of tuberculosis in the school is intimately bound up with the larger problem of the control of tuberculosis in the entire population. The school program must be closely coordinated with the state-wide tuberculosis control program. The routine X-raying of all teachers, janitors and other school personnel must be insisted upon. Routine chest X-rays for children in the last year of high school are to be commended.

Cerebrospinal meningitis in one or two recent years has been a significant factor in school-child mortality. Control, again, is largely a matter of early recognition and prompt medical care. The possibility of the prophylactic use of the sulfonamides in schoolrooms on the occurrence of one or more cases should be considered. The ability of the sulfonamides to cause a prompt clearing of the carrier state has been well established for meningococcic infection.

There are, of course, certain general procedures in the school, which, in themselves, are of utmost value. As I have mentioned before, among these none stands higher than the primary function of the school, itself, that is, education. Only through the continued education of future generations in the value of immunization, early medical care, use of pasteurized milk, clean water supplies and

personal hygiene, can we hope to maintain our present gains, or to secure future improvement.

Another general measure which could be taken in the school relates to the school cafeteria. Every year there occur outbreaks of illness, sometimes rather extensive, which are spread through this means. It is worthwhile reiterating that in the school cafeteria, as in all other food-borne outbreaks, the important thing is the relationship between the time of preparation of a food and its serving. Food-borne outbreaks of illness occur under three circumstances only. One is the use of raw milk or raw molluaes, another is the use of inadequately cooked food, and the third, and by far the most important, is the serving of food that has been prepared and left at room temperature for one or more hours before serving. This applies particularly to the re-serving of foods cooked on a previous day and held without adequate refrigeration.

Another method, the value of which is still under investigation, but which I may mention, is the use of ultraviolet lighting. Dr. Wells, in his Swarthmore experiments, has introduced evidence which would tend to indicate that the use of ultraviolet lighting in the schools may very considerably lower the incidence of certain respiratory diseases among school children. Recent evidence has accumulated to indicate that in military barracks ultraviolet lights may have a similar effect. I would like to emphasize, however, that this matter is still not entirely proven and requires further investigations as to its limitations. At the present time, the State Department of Health is carrying on a rather extensive experiment on the value of ultraviolet lights in central schools in Port Byron, Cato-Meridian and Mexico. The Westchester County Health Department is also conducting an experiment in village schools in Pleasantville. The results of these two studies are not ready for presentation as yet, but combined with the experience of Dr. Wells, one might hazard the guess that under conditions where school children have little contact outside the schoolroom, the ultra violet lights may eventually prove to be of great value, however, where close contact occurs, as in school buses, the value may be greatly diminished. I should like to re-emphasize that the use of ultraviolet irradiation in schoolrooms is still largely experimental, and that we are not in a position to recommend its wide-spread use on other than an experimental basis at the present time. The possibility also exists that germicidal mists, possibly using glycol or other bactericidal substances, may also prove to be of great value, but these, even to a greater extent than ultra violet lights, are yet

experimental, and their limitations of usefulness are as yet undelineated.

In summary, I may say that the control of communicable disease in the school child may be accomplished by certain general procedures. The school, through its educating function, can contribute most vitally to this end. Much of the control of communicable disease in the schoolroom must be initiated in the preschool years. An alert school nurse and school physician, maintaining close liaison with the health officers and private physicians, may detect many diseases and outbreaks in their incipiency, and allow opportunity for proper therapeutic or control measures. Among other methods highly recommended are close scrutiny of the conduct of food-handling in the school cafeteria, and the requirement that adults in contact with a school child have chest X-rays. There is the possibility of the use of sulfonamides prophylactically in meningitis. In the future, ultraviolet lights and germicidal mists may prove to be a significant factor in forwarding the further reduction of communicable diseases in the school child.

It is worth giving final emphasis to the absolute necessity for the closest working arrangements and interchange of information among all those persons working for the well being of the school child, including the parent, the private physician, the teacher, nurse-teacher, school physician and the health officer.

* * * * *

Antecedent Nutrient and Swimming,—Haldi and Wynn studied the performance of swimmers in a hundred yard sprint to determine the influence of the size of the antecedent meal on severe exercise of short duration. The time required to swim each of three laps in the hundred yard sprint was the same two and a half to three hours after a heavy meal as when a light meal was taken. Supplementation of the light meal by the ingestion of 50 to 100 Gm. of sucrose before swimming had no effect on the swimming time. The drop off in the second and third laps which is taken as an objective index of fatigue was the same regardless of the amount of the food intake before swimming. The blood sugar level before swimming was the same two to three hours after the various amounts of antecedent food intake. There was a rise in the blood sugar immediately after swimming, which was practically the same in all experiments. This rise in blood sugar was apparently a direct effect of exercise and not due to emotional stress. It is concluded that there is no relationship of speed, power and skill in swimming a hundred yard sprint to the amount of nutriment taken two to three hours before swimming. *Journ. A.M.A.*, Aug. 31, '46, p. 1532

THE FUTURE OF THE SCHOOL HEALTH PROGRAM: THE SCHOOL PHYSICIAN'S RESPONSIBILITY*

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The physician engaged in school health work will more and more be concerned with the physician student relationship, the physician principal relationship, the physician teacher relationship and the professional relationship that he will have with all people engaged in school work. It is likely that the physician will devote less and less time to administrative work in schools. Physicians are not going to be too plentiful for a number of years and they can best serve education by doing the professional work for which they are trained. There doesn't seem to be disposition in education to encourage physicians to devote their whole time to school health work. The shortage of physicians which will prevail for years will give time to all concerned to study the health work and determine who are best qualified to do this work.

In the large social organization like education the activities of schools, colleges, and teacher training institutions, which reach all children, the matter of health cannot be omitted from the curriculum. What is it that children and adults should know about health? They should, of course, know something about caring for their individual health and they should also know something about community health. Like other learnings, they have learned some things about health before entering school. There is much that they have not learned. There is much that they need to unlearn. In education it will be necessary for every teacher to teach health. It is likely that these teachings should be presented at such times as they are pertinent. Health teaching which is integrated with all teachings will be most effective. The school physician should stand by as a consultant in all health matters that have to do with the individual health of students as well as the community health. The school physician should be thinking at all times of health in its broadest aspects. This means mental health, emotional health, physical health and social health. Every contact made by the physician with a student should promote healthful thinking and healthful doing on the part of the individual contacted. Some one, preferably the school nurse, will be in charge of the health records of

* Presented before the New York State School Physicians' Association, Saratoga Springs, N. Y., June 24, 1946.

students. The nurse will have a history of each child's health ready for the physician before he examines the child. All immunizations and protective measures which have been taken against communicable disease should show on the student's health record. The school physician will be interested in seeing to it that every child has the benefit of such protective measures as are available.

Some day education particularly and society generally will come to see that in schools there is a wonderful opportunity to study children with reference to all aspects of growth. When this time comes, school physicians will find much of interest in school work.

To my knowledge there isn't very much being done in any schools in the way of research with reference to growth and development. The school physician will need to be a pediatrician and a psychiatrist. He will indeed need to be well grounded in all the medical specialties. There is so much change going on about us that some day it may be thought well for the schools to do certain clinical work. This philosophy, of course, is not popular now in the medical profession. It is hard, however, to reconcile the amount of psychotherapy done in many schools when the policy in education is generally understood to include only education with reference to health and not any clinical work. The physician in schools today is limited to educational work in health. In some places education includes more than it does in other places. It will be well in education to decide very definitely just what part the physician should play or just how inclusive his work should be. It seems to me that as yet we have not done this.

* * * * *

Mental Hygiene Service for Preschool Children,—The first mental hygiene service for children of preschool age will be opened this fall to be known as the Council Child Development Center and to include a child guidance clinic, a nursery school for study and treatment of the children and facilities for consultation with parents. The center, to be operated on a three year experimental basis under the joint auspices of a group of local agencies, is said to be the first of its kind to be established in New York City for preschool children. Its professional staff will include three psychiatrists, a psychologist, a pediatrician, two psychiatric social workers and three group teachers; also assistant teachers and student social workers for the nursery. The director of the center will be a psychiatrist. *Journ. A.M.A.*, July 20, 1946, p. 1012.

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THE FUTURE OF THE SCHOOL HEALTH PROGRAM: THE SCHOOL NURSE-TEACHER'S RESPONSIBILITY*

JANET E. BROWN, R.N.

School Nurse-Teacher, Mt. Vernon, N. Y.

Administrators of education are becoming more aware of the need for better and more effective health service and education in our schools.

The military findings of the physical and mental defects of the youth of our country are proof that more drastic steps are needed in the field of remedial work. To realize this end we must provide more health service in our schools with emphasis on quality rather than quantity.

The State of Pennsylvania has such a law. It reads as follows: All private and public schools must have each child examined yearly by a qualified doctor. The law further states that the correction of the defect is the direct responsibility of the parent and action may be taken by law if the defects are not corrected. It provides money to have defects corrected where there is financial inability to do so.

Corrections should be done while our children are young. Good examinations are useless unless corrective measures are provided. Therefore, adequate provision must be provided for the correction of all defects, emotional as well as physical. By adequate provision I mean, the use of and cooperation with all existing health agencies and clinics that are available to school children. There must be sufficient personnel in the schools to do good follow-up work.

Health is a primary objective of good education. With happy healthful surroundings, friendly guidance in the solving of health problems, development of good attitudes towards one another, our children of today should reach maturity with their feet firmly on the ground.

The nurse-teacher's responsibility in such a program should include five major points:

First—The initial step is to assist at a good physical examination and see that the recommendations are carried out. Here I would include a more thorough physical examination than is now being given. I would lay emphasis on the social and emotional life of the child as reported from observations by the class room teacher, principal and nurse-teacher. Children showing undue fa-

* Presented before the New York State School Physicians' Association, Saratoga Springs, N. Y., June 24, 1946.

tigue, worry or complete discouragement should be given special help and guidance. Such conditions may be more serious than physical defects if allowed to persist. I would also include a good working paper examination; examination of teachers and cafeteria workers including x-rays; yearly eye and ear examinations and health guidance especially in borderline mental, nutritional and posture cases.

Complete records must be kept on each child. A well kept cumulative record from pre-school days may prove to be a real asset to a child in later life. This was especially true during war years when records were available to the armed forces at the request of the inductees' families; to the Red Cross and to induction boards.

Second—A good follow-up program of all cases showing deviations from the normal is absolutely essential. This includes not only reports but education of the parents to the need and necessity for correction of all defects. The school staff also must be made fully aware of these needs. If parents do not have a family physician, arrangements must be made to assist the family in receiving clinic or hospital care. Even then it is not always possible to get the family's cooperation. One gentleman I have known decided that God put the tonsils in his child's throat and they should remain there. This gentleman was a milkman and he felt that by using sixteen quarts of milk a day for a family of seven that they would have no health problems. After children have received re-examinations and the defects have been corrected, these corrections are recorded on the medical records. Teachers are notified of each child's defect thus enabling them to be more sympathetic and understanding with the child. Adjustments are arranged in each classroom for the proper class seating of all children having eye or ear defects.

It is important to allow ample time for the checking and observation of pupils with too frequent absences. Under this I would include checkups on children who have been absent for two or more days. This procedure helps to control communicable disease and pays very big dividends for the time involved.

Third—The school plant or building comes in for a share of the nurse-teacher's thought and time. The classroom needs to be properly heated and the ventilation of the room is most important. A check of the lighting and seating in the various rooms should be made early in each term. The light meter ought to be used in the classrooms and in the various parts of the classroom. Tests with

the light meter under different weather conditions is a very revealing indication of the inadequate lighting conditions in many of our school buildings. Even some of the more modern buildings show inefficient lighting. Some lighting conditions have been corrected simply by washing the light globes.

Cafeterias should be cheerful with plenty of room for a restful quiet lunch hour. Lavatory facilities including soap and towels near the cafeteria are important in teaching children the value of hand washing before meals. It also keeps down disease thereby improving attendance records. Many diseases are transferred from hand to mouth. Clean hands eliminate much of this. The statement was made by one of the prominent health officers of the state that clean hands were the most important factor in control of polio.

Sufficient rest rooms should be provided for teachers and children. Children that show undue fatigue ought to be given rest periods in school.

Fourth—Health education of an informal nature includes administrators and boards of education as well as pupils and parents. Every contact made by the nurse-teacher should have educational value. Administrators are assisted in formation and interpretations of health policies. It is necessary at all times to stress the value of the mental hygiene and child guidance clinics. Conferences are held with principals on the planning of the school day with thought given to the pupils' loads and the emotional and physical health of the teacher. A teacher who has good health and peace of mind usually has a well adjusted group of students. The school system with which I am associated has had a mental hygiene clinic in operation for a year. A full time psychologist is in charge under the school physician. A part time psychiatrist is employed.

The parents and children should always be given help and guidance when and where it is indicated. A kind word and friendly advice are invaluable in dealing with children. It may be the means of making some child a better adjusted adult. The mental problems of children are never trivial. Thought and time are given to the recommendations received from the psychiatrist. The complete cooperation of the entire school staff is needed in carrying out the program recommended for each individual child. One of the functions of the nurse-teacher is to achieve this cooperation from the staff. The school health council is an excellent medium for obtaining this cooperation.

The fifth and last point should be community cooperation. It is only by the cooperative efforts of the professional and civic

group interested in the health and welfare of children that ways and means can be found to give our children the best in health today. This might be best accomplished by the formation of a community health council. The school nurse-teacher should take an active part in the work of such a council. By cooperation with and participation in such a group the nurse-teacher enriches her knowledge of community health and brings added stimulus to her own work.

To summarize the above points, the school nurse-teacher may be called the liaison officer between the child and the school personnel, the child and the parents, the parents and the school, and the child, parents and community health agencies.

* * * * *

Tuberculosis and War,—In this country the dreaded postwar upturn in tuberculosis mortality has not occurred. The estimated rate for 1945 is well below that of the previous year. Several reasons may be cited for this happy circumstance, among them the inclusion of chest X-rays in examination of recruits for the armed forces. From this procedure a threefold benefit accrued: contact infection among the fighting men was noticeably reduced; many early cases found, though unfortunately not all, sought proper treatment; and, perhaps most significant of all, there was wide educational value in this huge example of the mass X-ray process itself.

The public was not slow to grasp the diagnostic importance of chest X-rays for the apparently healthy. The facts revealed at induction centers called physicians' attention anew to their obligation to discover and treat tuberculosis in its incipient, symptomless stage.

Fifty years ago Dr. Fitz at Harvard taught that in no baffling case could differential diagnosis be called complete till tuberculosis had been ruled out. Today the general practitioner has the means, denied to earlier physicians, for carrying out this teaching, namely, the tuberculin test and the X-ray.

Finally, it must be borne in mind that mortality and infection rates are not the same. The decline in infection rates lags far behind. A large residual pool of potential infection still remains, against which the public can be protected only by discovery and adequate treatment of the potential spreader in his nonbacillary period. Kendall Emerson, M.D., Managing Director, National Tuberculosis Association, New York City. From the *Journal Lancet*, April 1946, page 95.

* * * * *

THE FUTURE OF THE SCHOOL HEALTH PROGRAM: MENTAL HYGIENE*

FREDERICK H. BAIR, PH.D.

Executive Assistant to State Commissioner of Education
Albany, New York

Whatever I contribute to the discussion must be in the nature of observations from a general educator, not at all a specialist, as the result of twenty-five years of experience as a school Superintendent, mostly in small, perhaps fairly called elite, school situations. I say this to make clear that I do not pretend to speak as a technician; nevertheless, I have been closer to the individual pupil than most men in administrative functions.

In my judgment one of the most fruitful advances in education in the next ten or twenty years is likely to be in the field of mental health. I shall touch briefly on four areas in which such advance is likely to be notable: 1. pre-school conditioning of children, 2. the further application of psychology to intellectual achievement, 3. the wider application of psychology to personality development, and 4. the reform of school processes, with especial application to secondary education, in dealing with non-academic boys and girls.

1. The granting of full State Aid to Kindergartens, including 4-year-olds, by the 1945 Legislature, presents a practical opportunity for New York State to move vigorously into an area which is of the most crucial importance for mental health. Traditionally, schooling has begun at six, on the general principle that children of that age are ready to read. But research has abundantly established that children acquire very deep aims and learnings long before the age of six: e.g., language, in form of speech, science, art, sensitivity to personal beauty, and certainly to selfishness and malice. Confirmed bad behavior foreruns malnutrition, instability and moral deficiency. So, a good kindergarten is quite as important as a 3rd or 5th grade, and it is probable that widespread three-year nursery schools, illuminated by the best research, may do as much or more for our society as equally widespread college education.

For the conditioning of infants to be maximally effective, school people themselves must become convinced by sound experience of its utility, must know from observation what values it brings to children, to parents, and to society.

As to paying its own bill, this movement should be viewed

* Presented before the New York State School Physicians' Association, Saratoga Springs, N. Y., June 24, 1946.

against the bill for crime alone in the United States—not counting insanity, nervous collapse, etc.—which is five times as great annually as the total cost of education.

2. The school "psychologist" in the past has been not so much a psychologist as a psychometric clerk. The work has been useful, but some serious damage has been done. We need to know more about the meaning and dirigibility of intelligence and the processes and conditions of learning, and these knowledges will intimately affect mental health. I look for great practical advance from the breaking down of the generalized and abstract I. Q. into elements, and the study of their cultivation and inter-relation.

3. A penetrating survey of almost any school will reveal the fact that it is in considerable degree a psychiatric ward. One fifth of the pupils can profit by intensive psychological treatment at any given time, and as many more occasionally. The school cannot go on indefinitely teaching subject matter exclusively while it watches personalities disintegrate under its very eye. Questions: What is the school able to do, legally, at present, in the way of psychological and psychiatric aid? What should it be able to do? What is it *prepared* to do, technically? What should it be prepared to do? How can education and medicine cooperate best to the maximum results for children?

4. Every research study for the last two decades has revealed or emphasized the immense percentage of drop-outs from our secondary schools. "The High School and Life," (Regents Inquiry) shows that these drop-outs are almost entirely unable (and indisposed) to pursue further learning, unable to seek jobs effectively, or to hold them, indifferent to social responsibility, or, as the Inquiry said, "without social conscience." Here is a seed-bed of frustration, bad mental health, potential or actual insurrection and revolution. Questions: Are our schools fifty per cent effective? What changes of aims, techniques and results should be sought? How much do elementary schools contribute to the early drop-outs from high school? What changes are needed?

* * * * *

MEETINGS

The American School Health Association with the American Public Health Association at Cleveland, Ohio, November 11-14, 1946. Headquarters, American School Health Association, at Hotel Statler.

* * * * *

THE FUTURE OF THE SCHOOL HEALTH PROGRAM: THE DENTAL PROGRAM*

CHAUNCY VAN ALSTINE, D.D.S.
State Supervisor in Charge of Dental Hygiene Education
State Education Department
Albany, N. Y.

The recent Selective Service findings relative to the mouth health of the youth of the Nation has made it more than ever apparent that dental health is the most neglected, as well as the most important, aspect of any proposed health schedule. Statistics reveal that 95% of our national population has dental caries.

In view of the present acute shortage of dental hygienists for dental offices, industry, institutions, public health and school programs, and the increasing demand in the immediate future, definite steps must be taken to meet the situation.

Dentistry is one of the most important professions in the school health programs of the country. It has become increasingly necessary in broad programs of community health.

Regents Regulations provide "that all schools under the jurisdiction of the State Education Department, shall provide a program of health and physical education in an environment conducive to healthful living," as well as to "Provide and maintain a continuous and satisfactory school health service."

Dental hygiene is an integral unit of the school health program and as such its primary function is the protection and conservation of dental health. This is accomplished through the dental examination of the pupils' teeth, and individual instruction by the dental hygiene teacher, the correction of defects by the family dentist and the education of pupils, teachers and parents.

In compliance with Article 49, Section 1306, subdivision 7, of the Education Law as applied to dentistry in this State, boards of education employing dental hygiene teachers shall appoint a supervising dentist. The supervising dentist accepts this position in an honorary capacity without remuneration much the same as do members of the school board. His duties involve consultation, visitation and advice regarding equipment, supplies and professional guidance to the dental hygiene teacher.

In order to work in a school, a dental hygienist must meet certain additional educational requirements leading to certification as a dental hygiene teacher. A provisional certificate requires 6

* Abstract by author of discussion presented before the New York State School Physicians' Association, Saratoga Springs, N. Y., June 24, 1946.

hours of approved educational courses. This certificate is good for 5 years. 12 additional hours are required in specified educational subjects for a permanent certificate for dental hygiene teacher.

The school dental hygiene programs are under the supervision of the State Education Department, exclusive of the schools in New York City, Rochester and Buffalo which are under the respective boards of health.

The State Education Department recommends that the schools adhere so far as possible to a maximum pupil load of 1650 pupils for a full time dental hygiene teacher. This load should be reduced if transportation problems or outlying schools are included. The pupil load in any district should allow ample time for:

An adequate dental examination.

Recording of findings.

Notification to parents.

Individual instruction in dental hygiene.

Special assistance to classroom teachers in the use of dental health literature and in pupil guidance.

Follow-up service including conferences, clinical and professional contacts as well as recording all dental treatment.

* * * * *

NOTICE

Get a New Member or Subscriber,

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Annual Meeting, November 11th to 14th,

at Cleveland

AMERICAN SCHOOL HEALTH ASSOCIATION
ANNUAL MEETING, CLEVELAND
November 11 to 14, inclusive, 1946

Monday, November 11, 1946—

9:30 A.M., FIRST GENERAL SESSION, *Room A, Auditorium*

Presiding—S. B. MCPHEETERS, M.D., *President*,
Director, Goldsboro and Wayne County Department of Health,
Goldsboro, North Carolina

Health Clinic Rooms in School Buildings. HELEN CARY, M.D., Director, Division of School Hygiene, City Bureau of Health, Portland, Oregon.

Anemia in School Children — Summary of 14,000 *Hemoglobin Tests in* 15 *States.* RUTH BLAKELY, Junior Chemist, Nutrition Investigations and Services, Florida State Board of Health, Jacksonville, Florida.

Research Report of Child Health Needs and Interests on Which to Revise Health Instruction in the Denver Schools. ARTHUR LEWIS, Supervising Teacher, Department of Instruction, Public Schools, Denver, Colorado.

The Health Coordinator's Functions and Duties at the Secondary School Level. C. MORLEY SELLERY, M.D., Director, Health Service Section, Board of Education, Los Angeles, California.

2:30 P.M., SECOND GENERAL SESSION, *Room A, Auditorium.*

Presiding—S. B. MCPHEETERS, M.D., *President*,
and HELEN CARY, M.D., *President-elect.*

Twelve Years of Tuberculosis Case Finding Among High School Pupils. W. E. AYLING, M.D., Health Director, School Health Service, Syracuse, New York.

Tuberculosis in the School Child. L. S. JORDAN, M.D., Director, Riverside Sanitorium, Granite Falls, Minnesota.

Denver Area Rheumatic Fever Diagnostic Service — the 2,000 *Cases Studied in the First Two Years.* BERNICE WEDUM, M.D., Assistant Director, Rheumatic Fever Diagnosis Service, University of Colorado School of Medicine, Denver, Colorado.

"Plus Sphere Test" to Find Cases of Farsightedness. DAVID VAN DER SLICE, M.D., Director, Children's Health Center, Charles Stewart Mott Foundation, Flint, Michigan.

Some Observations on Malnutrition in the United States. WALTER WILKINS, M.D., Director, Nutrition Investigations and Services, State Board of Health, Jacksonville, Florida.

6:30 P.M., DINNER SESSION, *Lattice Room, Hotel Statler.*

Presiding—S. B. MCPHEETERS, M.D., *President*,
and HELEN A. CARY, M.D., *Vice-President.*

Presentation of the William A. Howe Award to:
JOHN E. BURKE, M.D.
CHARLES H. KEENE, M.D.
JOHN SUNDWALL, M.D.

The Physician's Job in the School Health Program. JOHN E. BURKE, M.D., Assistant Superintendent of Schools, Department of Education, Schenectady, New York.

The Responsibility of the Medical Profession for Child Development. CHARLES H. KEENE, M.D., Professor of Hygiene, University of Buffalo, Buffalo, New York.

American School Health Association in Retrospect and Prospect. JOHN SUNDWALL, M.D., School of Public Health, University of Michigan, Ann Arbor, Michigan.

Wednesday, November 13, 1946—

9:30 A.M., JOINT SESSION, *Ball Room, Auditorium.*

Food and Nutrition, School Health, and Maternal and Child Health Sections and American School Health Association

Presiding—MARIETTA EICHELBERGER, Ph.D., LEONA BAUMGARTNER, M.D., EDYTHE P. HERSHEY, M.D., and S. B. MCPHEETERS, M.D.

Signs and Symptoms of Nutritional Deficiency in School Children. NORMAN JOLLIFFE, M.D.

Discussion: WALTER WILKINS, M.D.

Health Observations Which Teachers Can Make. MILTON LEVINE, M.D.

Demonstration of Teacher Observation Film Strip. GEORGE M. WHEATLEY, M.D. and S. S. LIFSON.

How Teachers Can Help to Discover Behavior Problems. MORTON A. SEIDENFELD, Ph.D.

2:30 P.M., JOINT SESSION, *Room B, Auditorium.*

Dental Health Section and American School Health Association

Presiding—J. M. WISAN, D.D.S., F. C. CADY, D.D.S., and S. B. MCPHEETERS, M.D.

Current Concepts on Fluorine and Dental Health. F. J. MCCLURE, Ph.D.

Growth and Development of Teeth and Jaws. B. HOLLY BROADBENT, D.D.S.

The School's Responsibility in Dental Health Programs. OLIN E. HOFFMAN, D.D.S.

Newer Developments in Dental Programs for Rural Areas. CARL SEBELIUS, D.D.S.

Studies on Gingivitis and Vitamin C, (Colored Slides). WALTER WILKINS, M. D., Ph.D.

Thursday, November 14, 1946—

2:30 P.M., JOINT SESSION, *Club Room C, Auditorium.*

School Health and American School Health Association

Presiding—S. B. MCPHEETERS, M.D., and LEONA BAUMGARTNER, M.D.

Nuisance Diseases. DAVID VAN DER SLICE, M.D.

Medical Examination of School Children. HUBLEY R. OWEN, M.D.

Techniques of Vision Testing. WINIFRED HATHAWAY.

California Hearing Conservation Program. JESSIE M. BIERMAN, M.D.

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EDITORIAL

Diphtheria Mortality,—The Journal of the American Medical Association for July 27, 1945 makes its first report on diphtheria mortality since 1942. On the whole, the records of the 93 cities, each having more than 100,000 population, is not gratifying, since it shows an increase in some sections.

No one of the 14 cities of this size in New England nor any one of the 18 in the Middle Atlantic states shows a death rate as high as 1.0 per hundred thousand. If these areas can maintain such a low rate, why cannot other sections of the country do as well.

Thirty-seven cities had no diphtheria deaths in 1945:

Akron	Lowell
Albany	Lynn
Bridgeport	Newark
Cambridge	New Haven
Camden	Norfolk
Canton	Omaha
Des Moines	Paterson
Elizabeth	Peoria
Evansville	Reading
Fall River	Richmond
Fort Wayne	Rochester
Gary	Salt Lake City
Grand Rapids	Scranton

Somerville	Utica
South Bend	Waterbury
St. Paul	Wichita
Syracuse	Worcester
Trenton	Yonkers

Youngstown

and six additional cities stated that all diphtheria deaths were of non-residents.

Thirty-one cities had no diphtheria or typhoid deaths in 1945:

Akron	Paterson[4]
Albany[4]	Peoria[2]
Bridgeport[4]	Reading[3]
Cambridge[2]	Rochester
Canton[6]	Salt Lake City[3]
Des Moines[2]	Scranton
Elizabeth	Somerville[2]
Evansville[4]	South Bend
Fall River[3]	Syracuse
Fort Wayne	Trenton[2]
Gary[4]	Utica[3]
Grand Rapids[6]	Waterbury[2]
Lowell[2]	Wichita[3]
Lynn[9]	Worcester[4]
New Haven	Yonkers[7]

Youngstown[4]

2—No diphtheria or typhoid deaths in 2 years.
3—No diphtheria or typhoid deaths in 3 years.
4—No diphtheria or typhoid deaths in 4 years.
6—No diphtheria or typhoid deaths in 6 years.
7—No diphtheria or typhoid deaths in 7 years.
9—No diphtheria or typhoid deaths in 9 years.

In Rochester, N. Y., on July 22nd, 1946, there occurred the first death from diphtheria since 1934, the child of a soldier who had been moved about so frequently that no inoculation was made.

Here are marks to shoot at. While the control of typhoid fever is largely a matter of municipal sanitation as regards such factors as pasteurization of milk, pure water supply, and adequate sewage disposal, the control of diphtheria deaths is almost entirely a matter of preventive inoculations, and the early use of antitoxin to keep down the death rate of those not protected by inoculations. These, in turn, depend on an incessant campaign of education of parents, and of school and municipal health personnel.

The school personnel have a peculiar and personal responsibility. To be sure, inoculations against diphtheria should be carried out long before school age and by health authorities. When those authorities have failed to get the inoculations made, the school health workers and administrators, seconded by the teachers, should bring about this protection of children and, indirectly, of adults.

Five cities have a distinctly bad record, so much worse than the other cities that health and educational authorities there may well examine, overhaul and improve their procedures. The fact that they state that from one-third to all the deaths were in non-residents is only a partial and rather weak excuse. Suburbs pattern their health procedures largely on the health activities of the city about which they cluster, and city publicity reaches them.

The public of these five cities may well enquire into the activities of those responsible for the health of their communities.

Knoxville	17.3**
Sacramento	7.0**
Spokane	6.5**
Charlotte	6.0*
Fort Worth	5.6

The time to begin is *now.—C. H. K.*

* * * * *

ABSTRACTS AND NOTES

Rise in Mass Immunization Levels Needed to Combat Diphtheria Prevalence,—Eighteen upstate communities in New York now have at least 70 per cent of their children under five years of age immunized against diphtheria according to records on file in the State Department of Health. The cities on this honor roll, as of June 30, 1946, are:

Batavia	Mamaroneck	Port Chester
Binghamton	Middletown	Rochester
Corning	Newburgh	Syracuse
Hudson	Ogdensburg	Troy
Johnson City	Ossining	Watertown
Little Falls	Oswego	White Plains

Columbia and Westchester are the only two counties in the State where 70 per cent of the children under five years of age living outside of communities of over 10,000 population have been immunized.

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* All diphtheria deaths were stated to be in non-residents.

** One-third or more of the reported diphtheria deaths were stated to be in non-residents.

Percentages of children under five years of age immunized against diphtheria in other communities having a population of 10,000 or more are listed in the table appearing on the preceding page. Figures are based on populations estimated by births and deaths as of June 30, 1946.

The continuing rise in diphtheria prevalence in this State and elsewhere in the United States, as well as in Europe, makes intensification of mass immunization programs imperative. The increase in both diphtheria morbidity and mortality in Upstate New York which began in 1945 has continued in 1946. A total of 231 cases and 21 deaths has been reported thus far this year, the highest number of each since 1934.

The figures for 1946, by month, for diphtheria cases in the upstate area are: January, 24; February, 27; March, 21, April, 37; May, 56; June, 38; July, 28.

In view of this upward trend, artificial immunization of preschool children—at least 70 per cent—and reimmunization on entrance to school are urgently needed for the maintenance of adequate protection. It is important that the initial immunization be given at six months of age and consist in each instance of a complete course of two doses of alum precipitated toxoid or three doses of fluid toxoid. All children should receive a booster dose of 1 ml. alum precipitated toxoid when they enter school for the first time.

In areas of increased diphtheria prevalence, inoculation or reinoculation of all children through high school age who have not been so treated within the three years immediately preceding is recommended. Older children and adults should be inoculated with precaution and preferably only after Schick testing.

The situation certainly warrants re-emphasis of the importance of administering diphtheria antitoxin in all suspected diphtheria cases without attempting therapeutic tests with other agents or awaiting the results of bacterial examination of nose and throat cultures. *Health News*, New York State Health Dept., Aug. 19, 1946.

* * * * *

How Many Foot Candles?,—The problem of artificial illumination is of primary importance in the sanitation of occupied spaces. Adequate light conduces materially to comfort and efficiency in the duties and avocations of daily life; and faulty illumination causes eyestrain which may be accompanied by reflex functional disturbances of many other organs of the body. Sound standards for artificial lighting are therefore essential tools for the sanitarian, whether he is working in the school, the home, the office, or the factory.

The leadership of the Illuminating Engineering Society in preparing standards of lighting for various types of occupied spaces was therefore welcomed by the public health profession. During the past quarter-century, this organization—often in cooperation with the American Institute of Architects, and, usually, under the rules of procedure of the American Standards Association—has issued a large number of codes of Recommended Practice for Lighting.

These codes have added materially to our knowledge of this subject; and in relation to color of light, distribution of light and brightness contrast they are fundamentally sound. Prior to 1940, they were practical and helpful with regard to intensity of illumination. The code on School Lighting prepared in 1938, for example, called for 15 foot candles for classrooms, shops, and offices, 25 for sewing and drafting rooms and 30 for sight-saving classes. These standards are reasonable and are supported by adequate evidence. Since 1940, however, under the leadership of Matthew Luckiesh of the Nela Park Laboratories at Cleveland, there has been an extraordinary and progressive tendency to increase these standards so that with every report the minimum levels rise; and, beyond the minima set, it is suggested that still more astronomical intensities would really be desirable. Twenty-five to 50 foot candles are specified for average visual tasks, 100 foot candles or more for severe and prolonged visual work, and hundreds and even thousands of foot candles are indicated as desirable in certain cases.

Sanitarians have generally viewed these extravagant standards with justified suspicion. As long as J. E. Ives of the U. S. Public Health Service was alive, we always turned to him for counsel since, though he was a physicist, he understood physiology. Since his death we have turned to the psychologists as our best guides; and we are fortunate in presenting as the Special Review Article of this issue a thoroughgoing analysis of the whole subject by the outstanding leader in this field, M. A. Tinker, of the University of Minnesota.

In this article, Dr. Tinker analyzes the evidence presented by Luckiesh and his associates in support of their high demands. He shows how the physicists have treated light intensity as a purely quantitative factor, almost as if when a certain intensity proved good, more was necessarily better. They have ignored the fact that the human eye is an adaptive instrument and that preference at a given moment is a function of prior adaptation; not of permanent comfort. They have confused threshold visibility, which is chiefly physical, with ease of reading above the threshold, which

is quite a different problem. They have wholly omitted a consideration of the glare effect incidental to very high illumination. Above all—and this seems inexcusable for physicists—they have paid no attention at all to the shape of the curve of visibility and of visual performance. This curve (as shown by Ives many years ago for letter-sorting in the U. S. Post Office) rises rapidly with increase in illumination and then levels off to almost a straight line. Luckiesh computed that it would take 30 foot candles to make newspaper text matter equivalent in visibility to 8-point book type under 10 foot candles illumination; on the other hand, Tinker found that no improvement in reading performance with newspaper type actually resulted with increases beyond 7 foot candles. Lythgoe has found that, under certain conditions, visual acuity continues to increase up to 1,000 foot candles; but the inflection of the curve is at 10 foot candles and increase above 20 foot candles is slight. Actually, Tinker concludes that the critical levels of illumination for different visual tasks vary from 3 foot candles for reading large print to 30 for threading a needle; and that to allow an adequate margin of safety, standards for various activities might range from 10 to 50 foot candles; but not above.

The whole problem is strikingly reminiscent of the controversy of some decades ago with respect to school ventilation. In that field, too, the engineers called for standards (30 cubic feet per minute) which were shown to be excessive by physiological research; and, in view of accumulating evidence, the American Society of Heating and Ventilating Engineers changed its standards to conform to real human needs. The Illuminating Engineering Society should exhibit similar readiness to follow the truth. As Tinker points out, satisfactory results can only be attained by "coordinating the work of engineers, physiologists, and psychologists." Until such coordination is effected, we shall do well to follow the psychologists, since it is human health and comfort which is at stake. Editorial, *American Journal of Public Health*, Sept., 1946, p. 1041.

* * * * *

Typhoid Fever Mortality,—Medical science and public health administration have scored many brilliant victories over infectious disease in the past few decades, but none has been more dramatic than the conquest of typhoid fever. Since the turn of the century this disease has dropped from its position as a leading cause of death to one of negligible importance numerically. In 1900 the death rate from typhoid and paratyphoid fever in the United States was in excess of 30 per 100,000; in 1944 it was only 0.4, a

decline of 99 per cent. There are many large cities which have not had a single death from this cause for a number of years.

Marked progress has likewise been made in reducing the prevalence of the disease, particularly in the past decade. The case rate from typhoid and paratyphoid fever dropped fully 75 per cent in the country as a whole between 1934-1935 and 1944-1945. Whereas only 10 years ago there were well in excess of 20,000 cases a year, at present there are about 5,000 annually. Moreover, the effort to suppress the disease has been highly successful in every area of the country. These remarkable results have followed upon a variety of measures, such as the installation of sewer systems, the supervision of typhoid carriers, the inspection of food supplies, the examination of food handlers, antityphoid inoculation, the adoption of central water supplies and, above all, filtration and chlorination of these supplies.

Further progress toward the goal of eliminating typhoid fever completely will depend largely upon the success achieved in the South and Southwest, where the problem is now largely concentrated. *Statistical Bulletin*, Metropolitan Life Insurance Co., June, 1946, p. 10.

* * * * *

School Lunch Kitchens,—Layouts for school lunch kitchens with a "meal load" from 18 to 500 are now available to schools planning the construction of new kitchens or alteration of existing facilities. The plans were prepared by the Food Distribution Programs Branch, Production and Marketing Administration, U. S. Department of Agriculture. They were reviewed by the U. S. Public Health Service for conformity to its health and sanitation standards, and also reviewed and approved by the U. S. Office of Education.

Detailed diagrams show equipment needed and its arrangement for efficient use in the following situations:

Size of School	*Meal load*
One room ..... Four diagrams show the arrangement of a 30 pupil classroom, also the arrangement of an existing coatroom or a new addition for lunch preparation; use of mobile equipment; storage space; sink details and sink drainage system.	18- 25
2-4 classrooms ..... Plan for new kitchen is shown.	50-100
4-6 classrooms ..... Two diagrams present the plan for a new kitchen and a plan for present classroom converted into a kitchen and dining room.	100-150
6-10 classrooms ..... Diagram shows new kitchen with present classroom converted into a dining room.	150-250
10-14 classrooms ..... Plan is presented of existing classrooms converted into a kitchen and dining room.	250-350
14-20 classrooms ..... A plan for a new kitchen is shown.	350-500

(*California's Health*, Department of Public Health, June 15, 1946.)

Nutrition Program To Be Expanded,—Physicians connected with the State Board of Health and those in private practice have for years recognized hookworm infestation as a major cause of malaise and physical debility owing to the accompanying anemia. Much time and effort have been expended in studying this disease. Surveys still show a large percentage of school children in certain areas of the state to be infested.

Leathers, Keller and McPhaul,[1] in a survey made in 1937-1938 of 29,064 white persons living in rural communities in Florida, found 24.8 per cent to be infested with hookworms. In addition, they found the parasite present in 19.9 per cent of 4,121 specimens taken from Negroes.

Abbott, Townsend and Ahmann[2] demonstrated that anemia is a serious problem among rural children in Florida. In a recent study of 2,205 rural white children, 42.3 per cent were found to have hemoglobin values of less than 11.4 Gm. per 100 cc., indicating a serious health problem. There is evidence that anemia is also present in many children who are not suffering from hookworm disease. Negro children seem to be more subject to anemia than white chlidren in spite of their greater resistance to hookworm infestation. There is some likelihood that mineral deficiencies in the diet, and perhaps in the soil on which the food is grown, may account in some degree for the presence of anemia. It is natural to suspect that iron is one of the deficient minerals, but copper, cobalt, and other minerals, as well as certain vitamins and protein may play a role.

Last winter the State Board of Health, in cooperation with the State Nutrition Committee, sponsored nine clinical demonstrations on the subject of nutrition in several parts of the state, including Tallahassee, Jacksonville, Leesburg and Miami. The examinations were made by Dr. Walter Wilkins, Public Health Nutrition Officer of the War Food Administration. The findings, reported in the May 1945 issue of Florida Health Notes, prompted an editorial in the Journal of the American Medical Association.[3] These demonstrations brought to light follicular conjunctivitis, hyperkeratosis, angular stomatitis, cheilochisis, blepharitis, spongy gums and various signs suggesting rickets. The laboratory tests revealed hookworm and anemia. These and other problems concerning the relationship between health and nutrition require careful study on a large scale.

To direct the work of an enlarged program, the services of Dr. Walter Wilkins have been secured. Dr. Wilkins, who received the degree of P'ı.D. in biochemistry and nutrition from Vanderbilt

University and later was graduated from the medical school of that institution, served for some time as director of the Division of Child Health and Nutrition of the North Carolina State Board of Health. From 1942 until in December, 1945, while commissioned by the United States Public Health Service, he did extensive work in nutrition for the War Food Administration in most of the 48 states. Wilson T. Sowder, M.D., State Health Officer, from editorial section, Journ. Florida Medical Ass'n, March, 1946.

1. Leathers, W. S.; Keller, A. E.; and McPhaul, W.A.: Investigation Concerning Status of Hookworm in Florida, Am. J. Hygiene, Sec. D. 29:1-16 (Jan.) 1939.
2. Abbott, O. D.; Townsend, R. O., and Ahmann, C. F.; Hemoglobin Values for 2,205 School Children in Florida, Am. J. Dis. Child. 69:346-349 (June) 1945.
3. Nutrition of School Children, J. A. M. A. 128:1233 (Aug. 25) 1945.

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Physical Condition of School Children,—The report on the physical condition of Japanese school children, embracing an eight year period from 1937 to 1945, has just been released by the Education Ministry of the Nipponese government. This report includes elementary and middle school (high school) students of the four home islands Honshu, Kyushu, Shikoku and the northernmost "main" island, Hokkaido. This survey indicates a steady deterioration in the physique of children throughout the defeated nation. Japanese medical leaders consider significant the fact that weight of sixth grade boys in metropolitan areas fell by as much as 1.7 Kg. and the weight of girls in the same grade dropped as much as 2.2 Kg. from the base year. In contrast, doctors point to the rural areas, where averages of both sexes in that grade classification demonstrated a gain of 0.4 to 1 Kg. Authorities explain this disparity in the light of comparative abundance of food and healthful modes of life in the country. In the case of girls' high schools (there is almost no coeducation in Japan at the lower and middle school levels) the freshman and sophomore students showed the same loss as the boys of the second and third years, while the fifth year girls showed a drop of only 0.5 Kg. This indication of disparity between lower and final years of the high schools can be explained through knowledge of the Japanese conscript labor program during the war years. The upper class students were sent to rural areas to serve on the nation's farms, where they fared better than city youths as far as diet was concerned.

A similar discrepancy may be noted in the statistics on average heights. The median height of a male Japanese elementary school student in the city schools last year was 2.8 cm. less than in the base year 1937 and 3 cm. for females. But the height of children in schools of rural districts declined by only 0.4 cm. for males and 1.6 for females. Whereas the average height of middle school

students showed a decline of 3.3 cm., those in the upper grades engaged in labor services on the farms showed a slight increase in height. The Education Ministry report failed to make specific recommendations based on these statistics other than to label them "alarming." *Journ. A.M.A.*, Aug. 31, 1946, p. 1526.

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Truth vs. Falsehood,—A place I stopped the other day—I suggested they have their pet dog vaccinated against rabies. "But, doctor," this woman says, "I know there's a lot of talk about dogs having rabies but do you really think that's what it is?" "Well, good night!" I thought to myself, "where've you been all these years?" She's an intelligent woman and they read the newspapers and magazines and what not.

I asked her what she thought it was, if it wasn't rabies. "Well, of course," she said, "dogs have other things besides rabies." Then she went on to tell me some stuff she'd read: something directly contrary to what the recognized authorities were putting out. But what I was thinking about: it wasn't rabies, particularly. It's the responsibility it seems to me intelligent people ought to feel for keeping 'emselves informed—reliably informed on health matters, for their own good.

The truth is they could afford to assume a little responsibility for passing some of the authentic and reliable information on to friends and neighbors that aren't so favored in respect to education and mental acumen. It'd be a public service and might even contribute indirectly, at times, to their own protection.

People that drive cars—most of 'em make a point of knowing at least the essential things about the care of a car: grease and oil, water in the radiator and all that. And they post 'emselves, more or less, on the traffic laws. Well, it's hard enough to get a new car but it's an awful lot harder to get a new living body. And an arrest for violating natural laws—it might be St. Peter instead of the police justice.

This health information—they don't even have to go shopping for it. It's delivered and no extra charge. But even a "gift horse"—I wouldn't take one home, these days, without looking in its mouth. Anyway, I'd want to make sure it wasn't one of those Trojan horses: designed to mislead. Certainly, where health is involved, it pays to be discriminating. Like Henry Smith: "I always come to you, Doc," Henry says, "because I know I can depend on what you tell me even if I don't always believe it."

Paul B. Brooks, M.D., *Health News*, New York State Department of Health, Sept. 9, 1946, p. 152.